Remarks/Arguments:

I. Status of the Application

Claims 1-26 are pending in the application. In the office action dated March 22, 2005, the Examiner:

1) Acknowledged the Applicants' claim for domestic priority under 35 U.S.C. § 119(e), but alleged that the provisional application upon which priority was claimed had a different inventorship than the present application, thus failing a condition required to grant domestic priority under 35 U.S.C. §119(e);

2) Rejected claims 1, 3 – 5, 7 – 11, 13 – 15, 17 – 21 and 23 – 26 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,304,093 to Sharp et al. (hereinafter "Sharp"); and

3) Rejected claims 2, 6, 12, 16 and 22 as allegedly being unpatentably obvious over Sharp and further in view of EP 0 834 723 to Bump et. al (hereinafter "Bump").

In this Amendment, applicants have amended claim 17 to clarify the claimed subject matter. Applicants traverse the Examiner's rejections of claims 1 – 26 over the prior art and respectfully request reconsideration in light of the foregoing amendments and the following remarks.

II. Domestic Priority Should be Granted

The Examiner acknowledged the Applicants' claim for domestic priority under 35 U.S.C. § 119(e). However, the Examiner alleged that the provisional application upon which priority was claimed had a different inventorship than the present application, thus failing a condition required to grant domestic priority under section 119. Applicants respectfully point out that this allegation is in error, resulting, perhaps, from a misreading of the statute.

Because the provisional application 60/392,465 filed June 28, 2002 and the present application 10/609,007 filed June 27, 2003 share a common inventor (Steven Jacobs), the present application satisfies the inventorship condition of section 119. Section 119 states that "[a]n application for patent filed . . . for an invention disclosed . . . in a provisional application . . . *by an inventor or inventors named in the provisional application*, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed. . ." 35 USCS § 119 (emphasis added). The MPEP restates the condition in nearly the same language: "The second application must be filed *by an inventor or inventors named in the previously filed application.*" MPEP Manual of Patent Examining Procedures § 201.11 (emphasis added).

The Court of Appeals for the Federal Circuit interpreted the clause "an inventor or inventors named in the provisional application" to mean that the applications must merely share at least one common inventor: "For the non-provisional utility application to be afforded the priority date of the provisional application, *the two applications must share at least one common inventor . . .*" *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir., 2002) (emphasis added). Such an interpretation is

inconsistent with an interpretation that the two applications are required to have the identical set of inventors. Therefore, because the two applications share a common inventor (Steven Jacobs), all conditions of section 119 were met. Thus, the Applicants respectfully request that the present application be granted the priority date of the provisional application, which is June 28, 2002.

III. The Section 102 Prior Art Rejections Should be Withdrawn

The Examiner rejected claims 1, 3-5, 7-11, 13-15, 17-21 and 23-26 under 35 U.S.C. §102(b) as allegedly being anticipated by Sharp. For the reasons discussed below, Sharp does not teach, show or suggest all of the limitations of any of claims 1, 3-5, 7-11, 13-15, 17-21 or 23-26.

A. Claim 1

Claim 1 was rejected as being anticipated by Sharp. As will be discussed below in further detail, Sharp does not disclose each and every element of claim 1.

1. Invention Of Claim 1

Claim 1 is directed to an arrangement that uses a processing circuit to calibrate a Venturi valve. The arrangement includes a source of flow measurements and a processing circuit. The processing circuit is configured to provide a plurality of voltages to an actuator, and to obtain measurements of the resulting flow. The processing circuit also stores information representative of the relationship between actuator voltage and measured flow.

Thus, the calibration arrangement is configured to perform an entire calibration arrangement under the control of a processing circuit, thereby allowing for automation of the process if desired.

2. Sharp

Sharp discloses "a method and apparatus for controlling a fluid flow valve of the type having a movable element or other control parameter, there being a predetermined control parameter/fluid flow characteristic for the valve." (Sharp, col. 3, line 12). The apparatus in Sharp (by relying on the predetermined and fixed characteristics of the valve) uses the position of the movable element of the valve to derive a value for flow instead of measuring flow with a sensor. (Sharp, col. 5, lines 25-29). By so doing, the Sharp method and apparatus purportedly achieves the objective of avoiding the delay and suboptimal control rates inherent in systems employing a flow sensor. (Sharp, col. 2, lines 52-68; Sharp col. 3, lines 1-8).

3. Discussion Regarding The Patentability Of Claim 1

a. Sharp Fails To Teach Calibration Using A Processing Circuit

The Examiner cites Sharp as disclosing an arrangement for calibrating a Venturi valve, but the Examiner does not allege that Sharp teaches using a processing circuit for calibrating a Venturi valve. Although Sharp does teach using calibration data, it fails to teach an arrangement for calibration using a processing circuit as claimed by the Applicants.

Sharp only addresses calibration in three passages. The first passage is:

> The result of the Venturi valve's cone and spring pressure compensating action is that there is a specific and fixed relationship or characteristic between the valve's shaft position and the fluid flow through the valve. To the extent that this characteristic is not predetermined for a given valve, it may be empirically determined for the valve in a given application by performing an initial calibration procedure. Once the characteristic is known, all that is required to achieve a desired airflow is to move the valve shaft to the appropriate position for such airflow.

(Sharp, col. 1, line 59). The second passage is: "Accuracy is limited only by the accuracy of the calibration data . . ." (Sharp, col. 2, line 4). The third passage is: "the characteristic of shaft position to air flow through valve 16 is predictable and calibratable." (Sharp, col. 4, line 63).

Thus, while Sharp acknowledges that calibration must at some time be performed, Sharp does not disclose use of a processing circuit for calibration, much less a processing circuit that 1) causes voltages to be applied, 2) obtains flow measurements, and stores information representative of the relationship between each of the voltages and the flow measures. Using a processing circuit to perform all of these three steps of calibration is not inherent to "performing an initial calibration procedure." Calibration may be carried out in many ways that do not involve the use of a processing circuit as claimed. For example, one or more of the steps are typically carried out manually, or under the control of different processing circuits.

Accordingly, Sharp fails to disclose or suggest a processing circuit that is operable to cause voltages to be applied, obtain flow measurements, and store information as claimed. As a consequence, it is respectfully submitted that the rejection of claim 1 as anticipated by Sharp is in error and should be withdrawn.

B. Claim 21

Claim 21 was similarly rejected as being anticipated by Sharp. Claim 21 is directed to calibrating a valve using a processing circuit as outlined in claim 1. Thus, claim 21 is directed to subject matter that is similar to the subject matter of claim 1. Therefore, for all of the reasons given above with regard to claim 1, the Applicants submit that claim 21 is also in condition for allowance, which is hereby respectfully requested.

C. Claim 11

Claim 11 similarly stands rejected as allegedly being anticipated by Sharp. Claim 11 is directed to a method of calibrating a Venturi valve that includes a step of installing the Venturi valve in a facility. According to the claimed method, once the valve is installed, flow measures corresponding to each of a plurality of actuator voltages are obtained, and information representative of the relationship between each voltage and flow measure is stored. Thereafter, the Venturi valve is used as part of the air flow regulation operations in the facility.

Thus, claim 11 recites an *in situ* calibration procedure. Sharp does not teach or suggest "installing the Venturi valve in a facility" *and subsequently* "storing information representative of the relationship between each of the plurality of voltages and the flow measures" as claimed. The Examiner only appears to allege that Sharp inherently involves calibration in order to generate the curves between actuator position and flow rate. (Office Action at p.2). The

Examiner does not allege that Sharp teaches performance of such calibration *in situ*.

Moreover, it would be impossible to perform the calibration operation of claim 11 in Sharp because the installation of the Venturi valve arrangement as illustrated in Sharp does *not* include a flow measurement device, which would otherwise be necessary for calibration. As a consequence, to the extent that Sharp teaches calibration using a flow meter at all, Sharp teaches that such calibration is performed *pre-installation*.

Therefore, Sharp fails to teach or suggest each and every element of claim 11. It is therefore respectfully submitted that the rejection of claim 11 over Sharp is in error and should be withdrawn.

D. Claim 17

Claims 17 similarly stands rejected as anticipated by Sharp. Claim 17, as amended, is directed to a Venturi valve calibration method that includes determining first and second actuator voltages associated with predetermined first and second flow values, respectively. The method also includes applying a set of other voltages and obtaining flow measurements, wherein the other voltages are *between* the determined first and second actuator voltages. Thus, claim 17 recites a method in which first and second *voltages* are determined. The first and second voltages correspond to predetermined flow values. In other words, the calibration method starts by finding actuator voltages that correspond to known or predetermined flow values. Then, other voltage values between the first and second voltages are applied, and flow measurement values taken.

By way of non-limiting example, Fig. 2 shows a flow diagram in which actuator voltages are varied until they hit predetermined high flow and low flow values. (steps 206, 208, 210 and 212). The voltages corresponding to the high and low flow values become the upper and lower actuator voltage limits (V1 and V2). Additional calibration points are obtained by applying actuator voltages between the determined actuator voltage limits and taking the flow measurements at the applied voltages. (Step 214). Some of the details of this example are recited in claim 18.

Sharp, as discussed above, merely discusses that a flow versus voltage relationship may be obtained. Sharp does not suggest or even vaguely imply a method that involves determining first and second voltages corresponding to first and second predetermined flow values, and then applying voltages between the first and second voltages.

As a consequence, it is respectfully submitted that Sharp fails to teach or suggest each and every element of claim 17 as amended. It is therefore respectfully submitted that the rejection of claim 17 should be withdrawn.

E. Claims 3-5, 7-10, 13-15, 18-20 and 23-26

Claims 3-5, 7-10, 13-15, 18-20 and 23-26 were rejected as allegedly being anticipated by Sharp. Claims 3-5 and 7-10 depend from claim 1; claims 13-15 depend from claim 11; claims 18-20 depend from claim 17 and claims 23-26 depend from claim 21. Because claims 1, 11, 17 and 21 contain limitations that are neither disclosed nor suggested by Sharp, dependent claims 3-5, 7-10, 13-15, 18-20 and 23-26 also incorporate limitations that are neither disclosed nor suggested by Sharp. Accordingly, it is

respectfully submitted that the rejection of claims 3-5, 7-10, 13-15, 18-20 and 23-26 is in error and should be withdrawn.

IV. The Section 103 Prior Art Rejections Should Be Withdrawn

The Examiner rejected claims 2, 6, 12, 16 and 22 under 35 U.S.C. 103(a) as allegedly being obvious over Sharp and over Sharp in view of Bump. For reasons that will be discussed below, it is submitted that even if it were appropriate to modify the method of Sharp with the verification process of Bump, which it is not, the resulting modified method and apparatus of Sharp would fail to arrive at the inventions of any of claims 2, 6, 12, 16 and 22.

In particular, each of claims 2, 6, 12, 16 and 22 depend from and incorporate all of the limitations of claims 1, 11 and 20. As discussed above in detail, Sharp fails to teach or suggest each and every limitation of claims 1, 11 and 20. Even if Sharp were modified as proposed by the Examiner in connection with the rejection of claims 2, 6, 12, 16 and 22, the resulting combination would not arrive at the inventions of claims 1, 11 and 20. Thus, the proposed modification of Sharp does not arrive at the inventions of claims 2, 6, 12, 16 and 22.

More specifically, Bump is recited as teaching the addition of a verification step. In particular, the Examiner cited page 6, lines 55-58 of Bump as teaching a verification procedure that may be used in the Sharp calibration method and apparatus. (Office action at p.4). At page 6, lines 55-58, Bump states:

> If the instrument is an analog instrument, then the instrument is constructed and a calibration is performed on the instrument using nitrogen gas, for example. This calibration is then matched to a companion curve generated from the stored flow data for the process fluid. This is step S4. At step S5, a quality control check is performed to

> verify that the companion curve does match. If there is verification, then the instrument is shipped as indicated at step S6.

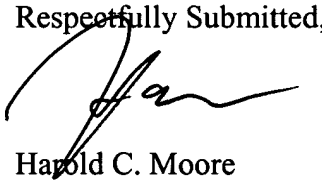
Thus, Bump teaches a "quality control" step is performed after the calibration curve fitting operation. The addition of a quality control step after the calibration curve fitting of Sharp does not address the shortcomings of Sharp with respect to independent claims 1, 11 and 21.

Accordingly, because the proposed modification of Sharp does not arrive at the inventions of 2, 6, 12, 16 and 22, it is respectfully submitted that the obviousness rejection of those claims is in error and should be withdrawn.

V. Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicants have made a patentable contribution to the art. Favorable reconsideration and allowance of this amended application is, therefore, respectfully requested.

Respectfully Submitted,



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